

538

DART AEROSPACE LTD		Work Order:	24129 D3196-1
Description: Dart 13-Man Shoulder Harness Kit (205/212/214/412)		Part Number:	D412-702-011
14.02.23			
Dwg: D3195 Rev. A; D3196 Rev. A; D3197 Rev. A1 Ref: D412-702 Rev.A page 9		Qty:	15 Kit(s)

Page 1 of 4

Step	Location	Procedure	By	Date	Qty
1	DC	Issue Traveler Note: D412-702-011 Kit consists of (2) D3195-041; (2) D3195-043; (1) D3196-1; (1) D3196-3; (1) D3196-4; (2) D3197-041.	u	05-08-31	15
2	DC	Photocopy bluefile and create labels per PPP D412-702-011 CHG001	NH	05-09-06	15
3	MV	Cut (2) blanks per (1) D412-702-011 Kit Cut blanks: (0.75" x 2.00") x 3.60" long Bar Material: 6061-T6/T651 (QQ-A-200/8) or (QQ-A-225/8) or (QQ-A-250/11) (M6061T6B0.750x02.000) Identify for D3195-1 Batch:	NH		
4	MV	Cut (2) blanks per (1) D412-702-011 Kit Cut blanks: (1.50" x 1.25") x 3.60" long Bar Material: 6061-T6/T651 (QQ-A-200/8) or (QQ-A-225/8) or (QQ-A-250/11) (M6061T6B1.500x01.250) Identify for D3195-3 Batch:	NH	u	
5	MV	Cut blank: (0.75" x 1.50") x 26.200" long Bar Material: 6061-T6/T651 (QQ-A-200/8) or (QQ-A-225/8) (M6061T6B0.750x01.500) Identify for D3196-1 Batch: <i>m196153</i>	5	05-09-06	15
6	MV	Cut (2) blanks per (1) D412-702-011 Kit Cut blanks: (0.75" x 1.50") x 34.750" long Bar Material: 6061-T6/T651 (QQ-A-200/8) or (QQ-A-225/8) (M6061T6B0.750x01.500) Identify (1) for D3196-3 Identify (1) for D3196-4 Batch:			
7	MV	Cut (2) blanks per (1) D412-702-011 Kit Cut blanks: 29.125" long Round Bar Material: 7075-T73 (QQ-A-200/11) or (QQ-A-225/9) 1" OD (M7075T73R1.000) Identify for D3197-1 Batch:			
8	MV	Machine D3195-1 as per Folio FA334 and Dwg D3195 Identify as D3195-1			
9	QC2	Inspect parts as they come off the CNC machine			
10	MV	Deburr and Tumble	NH	u	
11	QC8	Second check	NH	u	
12	MV	Machine D3195-3 as per Folio FA334 and Dwg D3195 Identify as D3195-3			
13	QC2	Inspect parts as they come off the CNC machine			
14	MV	Deburr and Tumble			
15	QC8	Second check			

RELEASED

04.01.08

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			
05/09/13	16	one D3196-1 Captains side 7ccu install 0.660' 040 to DEEP	RF 05.09.13	IT IS ACCEPTABLE AS PER DAVID E-MAIL. SEE ATTACH SHEET	EP 05/09/13	RF 05-09-13	RF 05.09.13	RF 05-09-13

Part No: _____

PAR #: _____

Fault Category: _____

NCR: Yes

DQA: QDate: 05/10/13

NOTE: Date & initial all entries

QA: N/C_Closed: _____

Date: _____

DART AEROSPACE LTD		Work Order:	24/29 D3196-1
Description: Dart 13-Man Shoulder Harness Kit (205/212/214/412)		Part Number:	D412-702-011
04.02.23 Dwg: D3195 Rev. A; D3196 Rev. A; D3197 Rev. A Ref: D412-702 Rev:A page 9		Qty:	15 Kits)
			Page 2 of 4

Step	Location	Procedure	By	Date	Qty
16	MV	Machine D3196-1 as per Folio FA339 and Dwg D3196 Identify as D3196-1	SD	05.09.12	15
17	QC2	Inspect parts as they come off the CNC machine	SD	05.09.12	15
18	MV	Deburr	SD	05.09.12	15
19	QC8	Second check	SD	05.09.12	15
20	MV	Machine D3196-3 as per Folio FA339 and Dwg D3196 Identify as D3196-3	SD	05.09.12	15
21	QC2	Inspect parts as they come off the CNC machine			
22	MV	Deburr			
23	QC8	Second check			
24	MV	Machine D3196-4 as per Folio FA339 and Dwg D3196 Identify as D3196-4			
25	QC2	Inspect parts as they come off the CNC machine			
26	MV	Deburr			
27	QC8	Second check	NA		
28	MV	Machine D3197-1 as per Folio FA340 and Dwg D3197 Note: Need to be faced to size Identify as D3197-1			
29	QC2	Inspect parts as they come off the CNC machine			
30	MV	Deburr			
31	QC8	Second check			
32	FP	Chemical Conversion Coat as per QSI 005 4.1 D3195-1-3; D3196-1-3-4; D3197-1	FC	05.09.20	15
33	FP	Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3 D3195-1-3; D3196-1-3-4; D3197-1	FC	05.09.21	15
34	QC3	Inspect work to Step 33.	NA	05.09.21	15
35	GA 04.04.05	Cut (2) blanks per (1) D412-702-011 Kit Cut blanks: (4.986" x 0.500") x 0.125" thick as per Dwg D3195 Material: D3195 Rubber 2.500" Punch holes as per Dwg Identify as D3195-5			
36	GA 04.04.05	Cut (2) blanks per (1) D412-702-011 Kit Cut blanks: (4.986" x 1.000") x 0.125" thick as per Dwg D3195 Material: D3195 Rubber 2.500" Punch holes as per Dwg Identify as D3195-7			

RELEASED

04.01.08

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

NOTE: Date & initial all entries

QA: N/C Closed: _____ Date: _____

DART AEROSPACE LTD		Work Order:	24/29 D3196-1
Description:	Dart 13-Man Shoulder Harness Kit (205/212/214/412)	Part Number:	D412-702-011
Dwg:	D3195 Rev. A; D3196 Rev. A; D3197 Rev. A1	Qty:	15 Kit(s)
Ref:	D412-702 Rev. A page 9		Page 3 of 4

Step	Location	Procedure	By	Date	Qty
37	GA	Bond D3195-5 into D3195-1 as per Dwg D3195 Pick: Qty _____ A/R _____ Description _____ Contact Cement _____ Identify as D3195-041			
38	GA	Bond D3195-7 into D3195-3 as per Dwg D3195 Pick: Qty _____ A/R _____ Description _____ Contact Cement _____ Identify as D3195-043			
39	QC5	Inspect work to Step 38			
40	GA	Assemble (2) D3197-041 as per Dwg D3197. (Note: D3197-1 is on BOM as material from Step 7) Pick: Qty Part Number Description Batch 4 D2690-5 Lanyard _____ 2 D3197-1 Bar _____ 4 D3242-1 Tag _____ 12 AN960JD10 Washer _____ 4 DARS-004 Pin _____ 4 MS21042L3 Nut (or -3) _____ 4 MS27039-1-24 Bolt & Screw _____ Identify as D3197-041			
41	QC5	Inspect work to Step 40			
42	KP	Pick: Packing Kit (Note: D3195-041/-043, D3196-1/-3/-4 are on BOM as material from Steps 3-6, 35-36) Qty Part Number Description Batch 2 D3195-041 Bracket _____ 2 D3195-043 Bracket _____ 1 D3196-1 Bar _____ 1 D3196-3 Bar _____ 1 D3196-4 Bar _____ 2 D3197-041 Bar _____ 4 D3198-1 Fitting _____ 18 D3215-041 Harness Assembly _____ 4 D3215-043 Harness Assembly _____ 4 AN4-5A Bolt _____ 4 AN4-13A Bolt _____ 8 AN4-20A Bolt _____ 20 AN960JD416 Washer _____ 12 MS21042L4 Nut (or -4) _____ 8 MS24694-S152 Screw _____ 2 D3268-1 Placard _____ Identify as D3196-046			
43	QC4	Inspect Kit 100% for Completeness on the W/O			
44	PK	Identify and pack for shipping as per PPP D412-702-011 1D+stack D3196-1	CL	05/10/25	15

RELEASED

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

NOTE: Date & initial all entries QA: N/C Closed: _____ Date: _____

DART AEROSPACE LTD	Work Order:	24/12/9 D3196-1
Description: Dart 13-Man Shoulder Harness Kit (205/212/214/412)	Part Number:	D412-702-011
04.02.23	Qty:	15 Kit(s)
Dwg: D3195 Rev. A; D3196 Rev. A; D3197 Rev. A1 Ref: D412-702 Rev.A page 9		Page 4 of 4

Step	Location	Procedure	By	Date	Qty
45	AC	Cost / part 32.09	54E	05-10-25	15
46	DC	Close W/O 30.04 Inspect Level 21	(1)	05/10/26	15

Rev	Date	Change	Revised By	Approved
A	03.10.17	New issue	KJ/RF	

RELEASED

04.01.08

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

NOTE: Date & initial all entries

QA: N/C Closed: _____ Date: _____

DART AEROSPACE LTD	Work Order:	24129
Description: Bar	Part Number:	D3196-1
Inspection Dwg: D3196	Rev: A	Page 1 of 1

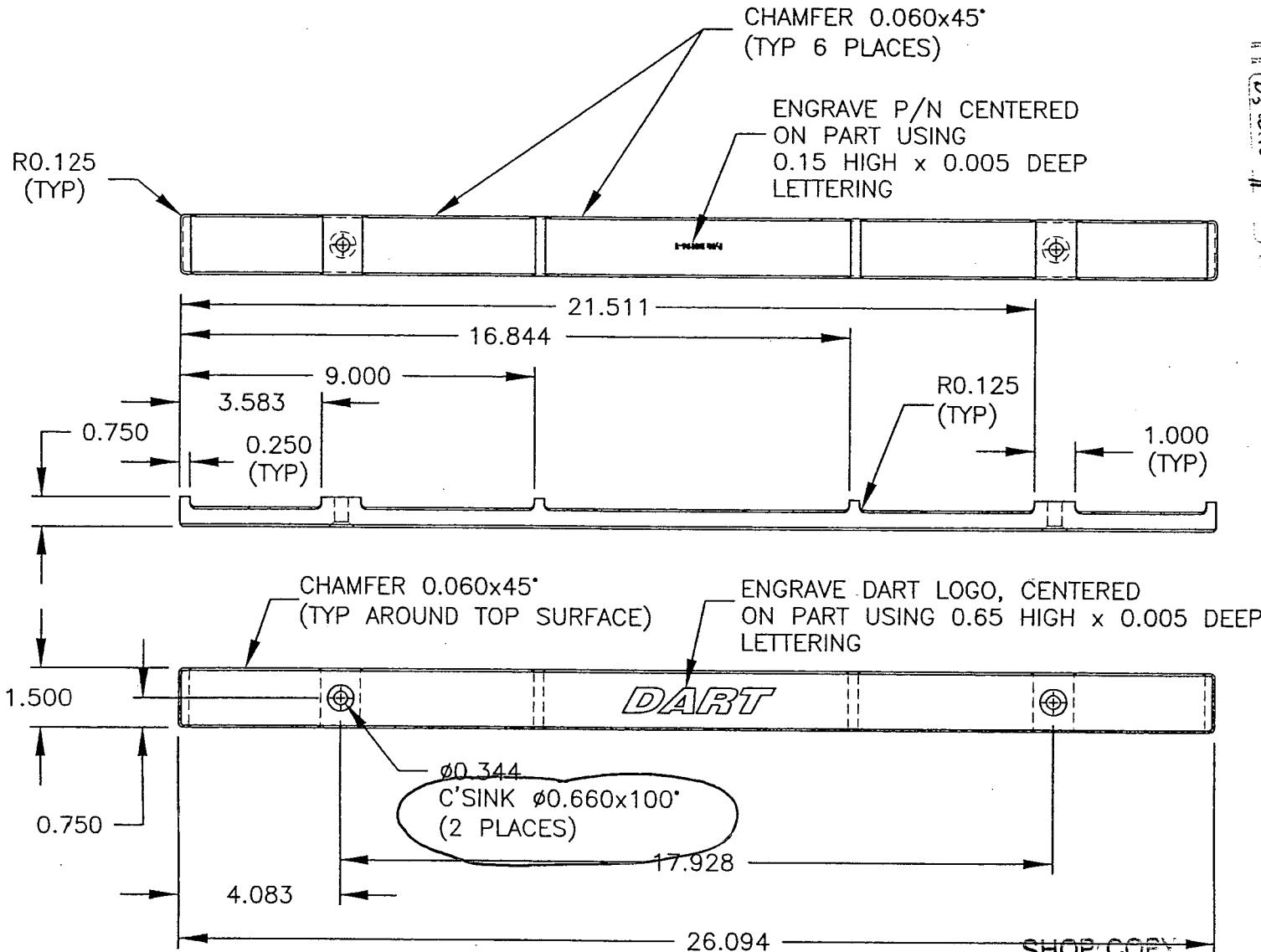
FIRST ARTICLE INSPECTION CHECKLIST

X First Article Prototype

Measured by:	SD	Audited by:	BC	Prototype Approval:	N/A
Date:	05.09.12	Date:	05.09.12	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	04.04.20	New Issue (P/O D412-702-011)	KJ/RF	[Signature]

RELEASED



D3196-1 BAR

- 1) MATERIAL: 6061-T6/T651 ALUMINUM (QQ-A-200/8 OR QQ-A-225/8)
(REF DART SPEC. M6061T6B)
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) FINISH: POWDER COAT GREY SANTEX (4.3.5.6) PER DART QSI 005 4.3
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

UNCONTROLLED
SUBJECT TO AMENDMENT
WITHOUT NOTICE

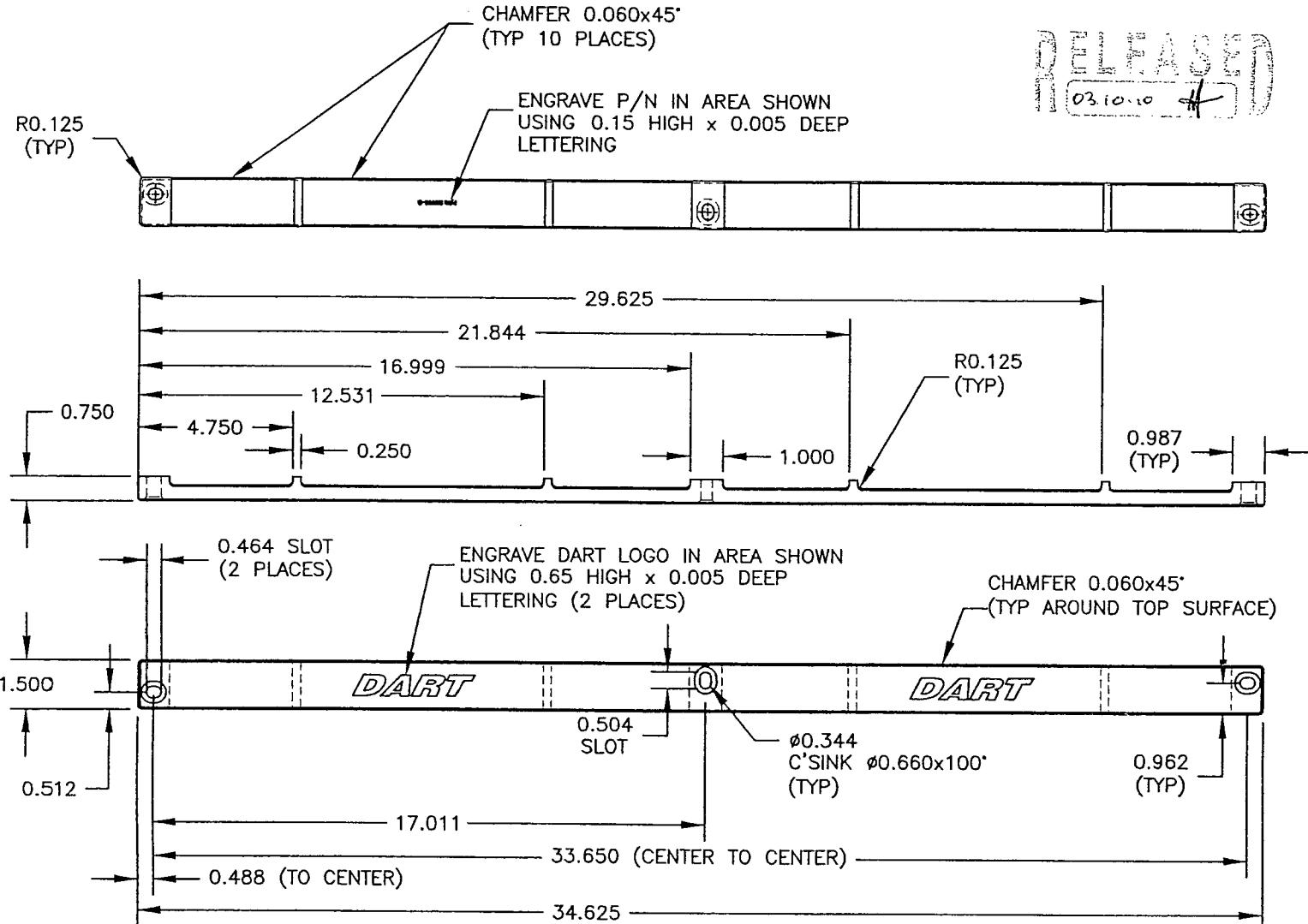
WORK ORDER

NO. 24129

DESIGN	DRAWN BY	DART AEROSPACE LTD
CHECKED	APPROVED	HAWKESBURY, ONTARIO, CANADA
DATE	DATE	DRAWING NO.
03.06.25	03.06.25	D3196
A	03.06.25	TITLE
		BAR
		SCALE
		1:4

DE
1
03.06.09
DART AEROSPACE LTD

COPIED
03.06.09



D3196-3 BAR

- 1) MATERIAL: 6061-T6/T651 ALUMINUM (QQ-A-200/8 OR QQ-A-225/8)
(REF DART SPEC. M6061T6B)
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) FINISH: POWDER COAT GREY SANTEX (4.3.5.6) PER DART QSI 005 4.3
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 24129

DESIGN	DRAWN BY	DART AEROSPACE LTD
		HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO.
03.06.25		D3196
DATE	TITLE	SCALE
	BAR	1:5



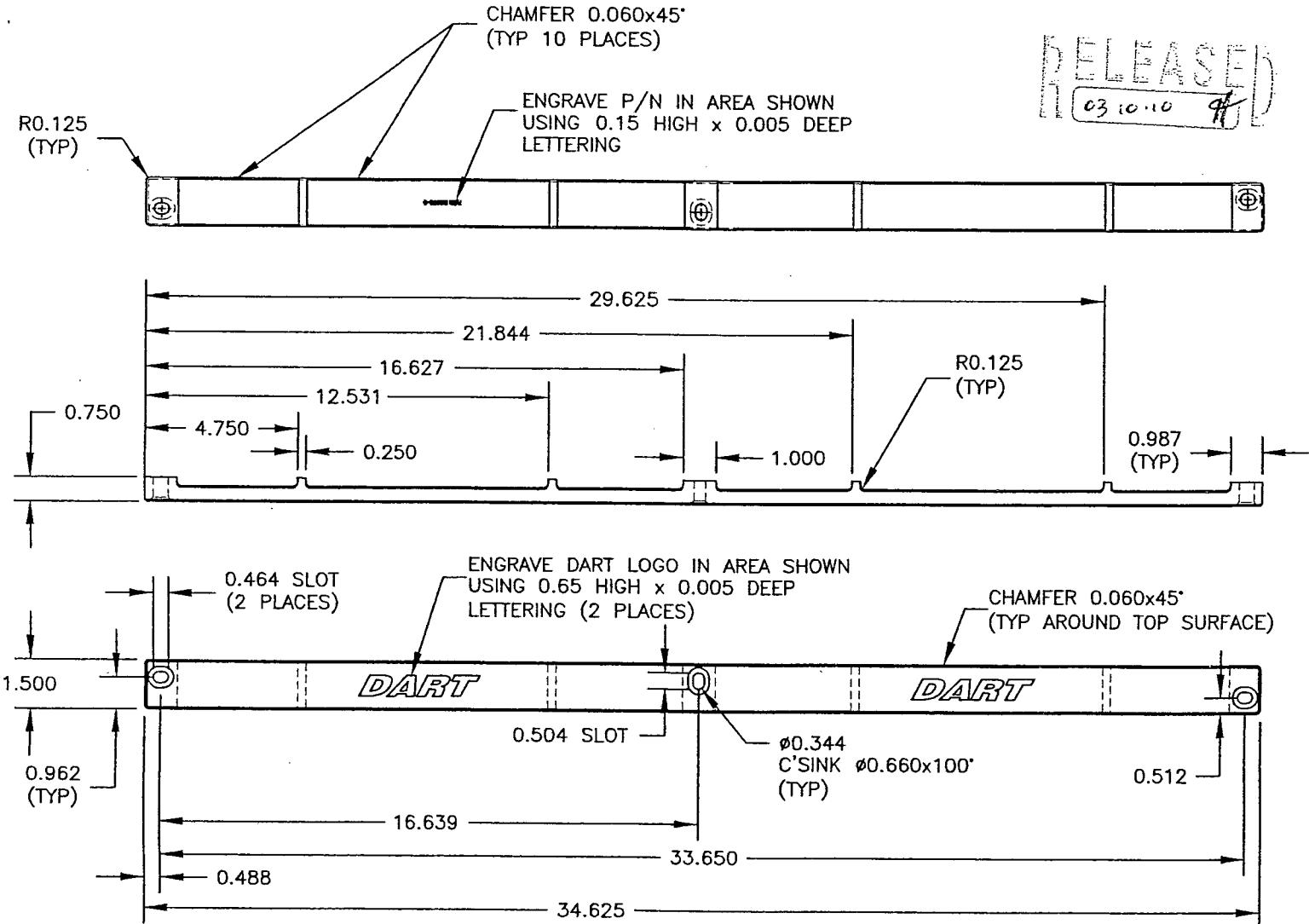
DESIGN
DRAWN BY

CHECKED
APPROVED

DATE
03.06.25

TITLE
BAR

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA
REV. A
SHEET 2 OF 3
SCALE 1:5



D3196-4 BAR

- 1) MATERIAL: 6061-T6/T651 ALUMINUM (QQ-A-200/8 OR QQ-A-225/8)
(REF DART SPEC. M6061T6B)
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) FINISH: POWDER COAT GREY SANTEX (4.3.5.6) PER DART QSI 005 4.3
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

SHOP COPY

RETURN TO
ENGINEERING

UNCONTROLLED COPY

SUBJECT TO AMENDMENT
WITHOUT NOTICE

WORK ORDER

NO. 24129

DESIGN	<i>IP</i>	DRAWN BY	<i>IP</i>	DART AEROSPACE LTD
CHECKED	<i>IP</i>	APPROVED	<i>IP</i>	HAWKESBURY, ONTARIO, CANADA
DATE	03.06.25	DRAWING NO.	D3196	REV. A
		TITLE	BAR	SHEET 3 OF 3
		SCALE	1:5	



Roberto Fuentes

From: "David Shepherd" <davids@dartaero.com>
To: "Roberto Fuentes" <robertof@dartaero.com>
Sent: Tuesday, September 13, 2005 2:09 PM
Subject: Re: D3196-1 Bar c'sink to deep

This is an acceptable deviation.

----- Original Message -----

From: Roberto Fuentes
To: David Shepherd
Sent: Tuesday, September 13, 2005 11:57 AM
Subject: D3196-1 Bar c'sink to deep

Hi David,

D3196-1 Bar batch: 24129, the c'sink litter big dwg call for \varnothing 0.660" X 100 and now is \varnothing 0.700" when was machine in both holes but only happen in one part. It is acceptable?

Note: see fax
Thanks,
Roberto

Job Costing Report

Dart Aerospace Ltd.
Hawkesbury

Aug 30, 2005
07:42 am

Work Order No	:	0024129	Department Code:	
Project Name	:	D3196-1	Burden Flags	: NNNNNNN
Project For	:	WK538	WO Status	: Open
Work Order Type	:	Main	Invoice State	: Not Invoiced
Main WO Number	:		Invoice Date	:
House Part Number	:	D3196-1	Invoice Number	:
Description	:	Bar	Invoice Amount	: 0.00
Manufactured	:	Yes		
Amount Req'd	:	15		
Amount Done	:	0	Order Entry No	:
Start Date	:	08-29-05	OE Value	: 0.00
Est Finish Date	:	09-21-05		
Act Finish Date	:		Est Mark Up	: 0.000%
Drawings Reqd	:	No	Actual Mark Up	: 0.000%
Ok for Approval	:			
Approval Rec'd	:			\$0 Posted to Finished Goods

	Estimated	Actual	Var. %	Posted	To Post
Material Cost	: 0.00	0.00	0.00	0.00	0.00
Engineering Hours	: 0.00	0.00	0.00		
Engineering Cost	: 0.00	0.00	0.00	0.00	0.00
Production Hours	: 0.00	0.00	0.00		
Production Cost	: 0.00	0.00	0.00	0.00	0.00
Packaging Hours	: 0.00	0.00	0.00		
Packaging Cost	: 0.00	0.00	0.00	0.00	0.00
OverHead Hours	: 0.00	0.00	0.00		
OverHead Cost	: 0.00	0.00	0.00	0.00	0.00
CNC Hours	: 0.00	0.00	0.00		
CNC	: 0.00	0.00	0.00	0.00	0.00
Misc. Hours	: 0.00	0.00	0.00		
Misc.	: 0.00	0.00	0.00	0.00	0.00
Burden	: 0.00	0.00	0.00		
Total Cost	: 0.00	0.00	0.00		
Mark up	: 0.000	0.000			
Selling Cost	: 0.00	0.00			

	Estimated	Actual
Labour Hrs/Amount Done	: 0.00	0.00
Profits/ (Loss)	: 0.00	0.00